

THE CONTRED STEAMES OF AMIRED OF

TO ALL TO WHOM THESE PRESENTS SHAM COME:

Holden's Toundation Seeds L.A.C.

MICCOLS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLEMISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RECEIT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT SED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN, FIELD

'LH334'

In Testimonn Murrest, I have hereunto set my hand and caused the seal of the Plant Haristy Frotestion Office to be affixed at the City of Washington, D.C. this twenty-ninth day of April, in the year two thousand and eight.

Q2-32-

Commissioner Plant Variety Protection Office Agricultural Marketing Service Colward V. Schafe

Agriculturo

REPRODUCE LOCALLY. Include form number and date on all	reproductions		Form Approved - OMB No. 0581-0055	
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE		The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.		
SCIENCE AND TECHNOLOGY - PLANT VAR		, , ,	or 1995. ermine if a plant variety protection certificate is to be issued	
APPLICATION FOR PLANT VARIETY PR (Instructions and information collection bur		(7 U.S.C. 2421). Information is held of	confidential until certificate is issued (7 U.S.C. 2426).	
1. NAME OF OWNER	·	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME	
Holden's Foundation Seeds L.L.C.		None	LH334	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and	ZIP Code, and Country)	5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY	
8350 Minnegan Road	•	(815) 758-9281 PVPO NUMBER		
Waterman, IL 60556		6. FAX (include area code)	- onnenna	
U.S.A.		(815) 758-3117	200600017	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FOR	M OF 8. IF INCORPORATED, GIVE	9. DATE OF INCORPORATION		
ORGANIZATION (corporation, partnership, association, etc.) STATE OF INCORPORATIO	N	Oct. 24, 2005	
Corporation	Delaware	August 27, 1999	·	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE	S) TO SERVE IN THIS APPLICATION. (FI	rst person listed will receive all papers)	F FILING AND EXAMINATION FEES:	
•			E : 3652.00 + 730.00	
Timothy R. Kain	Micha	ael J. Roth	R DATE 10/24/05 + 1/10/06	
8350 Minnegan Road		l. Lindbergh Blvd.	C CERTIFICATION FEE:	
Waterman, IL 60556	St. Lo	ouis, MO	F \$ 768.00	
			E DATE 4/15/08	
11, TELEPHONE (Include area code)	12. FAX (Include area code)	13. E-MAIL	14. CROP KIND (Common Name)	
(815) 758-9281	(815) 758-3117	trkain@monsanto.com	Corn, Field	
15. GENUS AND SPECIES NAME OF CROP		16. FAMILY NAME (Botanical)	17. IS THE VARIETY A FIRST GENERATION	
	•	·	HYBRID?	
Zea mays		Graminae	□ YES X NO	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT (Follow instructions on reverse)	SUBMITTED	19. DOES THE OWNER SPECIFY THAT CERTIFIED SEED? See Section 8	SEED OF THIS VARIETY BE SOLD AS A CLASS OF (3(a) of the Plant Variety Protection Act)	
a. X Exhibit A. Origin and Breeding History of the Varie	ty	YES (If "yes", answer items 20 and 21 below) X NO (If "no", go to item 22)		
b. X Exhibit B. Statement of Distinctness		20. DOES THE OWNER SPECIFY THAT		
c. X Exhibit C. Objective Description of Variety		VARIETY BE LIMITED AS TO NUMBE	ER OF CLASSES?	
d. Exhibit D. Additional Description of the Variety (Option of the Variety)	otional)	IF YES, WHICH CLASSES?	OUNDATION REGISTERED CERTIFIED	
e. X Exhibit E. Statement of the Basis of the Owner's C	· ·	21. DOES THE OWNER SPECIFY THAT VARIETY BE LIMITED AS TO NUMBE		
 X Voucher Sample (2,500 viable untreated seeds or, verification that tissue culture will be deposited and 		IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.		
repository) g. X Filing and Examination Fee (\$3,652), made payable	e to "Transurer of the United	FOUNDATION REGISTERED CERTIFIED		
States" (Mail to the Plant Variety Protection Office)	o to Treasuler of the Office		please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATE FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRAN	RIAL) OR A HYBRID PRODUCED ISFERRED, OR USED IN THE U. S.	23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?		
OR OTHER COUNTRIES?		☐ YES	X NO	
X YES IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE	NO DISPOSITION TRANSFER OR	IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		
USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (PIC		KEFEKENGE NOMBEK. (Freese use	pulse mulleted on reversely	
24. The owners declare that a viable sample of basic seed of	the variety has been furnished with applica		accordance with such regulations as may be applicable, or	
for a tuber propagated variety a tissue culture will be deported. The undersigned owner(s) is(are) the owner of this sexual	• • •		lictingt uniform and stable as required in Section 42	
and is entitled to protection under the provisions of Section	n 42 of the Plant Variety Protection Act.	iliety, and benevels) that the valiety is now, o	istilict, airio in, and statio as isquired in occutori 42,	
Owner(s) is(are) informed that false representation herein	can jeopardize protection and result in per	nalties.		
SIGNATURE OF OWNER THIRDY PL		SIGNATURE OF OWNER		
NAME (Please print or type)		NAME (Please print or type)		
Timothy R. Kain		. , , ,		
CAPACITY OR TITUE Patent Scientist	DATE 10/21/05	CAPACITY OR TITLE	DATE	
ST 470 (07-10-2003) designed by the Plant Variety Protection Office using Win	or 2000. Replacer former ungrises of CT 420	th are charlete	I See myerse for inclustings and information collection by den statement	

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; 18a. Give:
 - (2) the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- 21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Sold in U.S. - December 2004

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/isg/seed.htm

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, ege, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genefic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require allemative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

EXHIBIT A (revised)

Origin and Breeding History LH334

LH334 was developed from the single cross of HC33 x LH200 by selfing and using the conventional ear-to-row system of plant breeding. Yield, stalk quality, root quality, disease tolerance, late plant greenness, late plant intactness, ear retention, pollen shedding ability, silking ability and corn borer tolerance were the criteria used to determine the rows from which ears were selected during the development of LH334.

HC33 and LH200 the progenitors of LH334, are both proprietary field corn inbred lines of Holden's Foundation Seeds, L.L.C., of Williamsburg, Iowa.

Winter 1997-98	The inbred line HC33* (a proprietary Holden's inbred) was crossed to the inbred line LH200 (a proprietary Holden's inbred) in Hawaii Field/Row 23759.
Summer 1998	The S0 seed was grown ear-to-row and self-pollinated in nursery row 17400 in Iowa.
Summer 1999	S1 ears were grown ear-to-row and self-pollinated in nursery range/row 4603 in Indiana.
Winter 1999-2000	S2 ears were grown ear-to-row and self-pollinated in nursery row 4175 at Hawaii.
Summer 2000	S3 ears were grown ear-to-row and self-pollinated in lowa in nursery row 53352.
Winter 2000-2001	S4 ears were grown ear-to-row and self-pollinated in nursery row 19271 at Hawaii.
Summer 2001	S5 ears were grown ear-to-row and self-pollinated in nursery row 5235 at lowa.
Summer 2002	S6 ears were grown ear-to-row and self-pollinated in nursery row 52652 at Iowa.
Summer 2003	S7 ears were grown ear-to-row and self-pollinated in nursery row 37354-37365 at Iowa.
Summer 2004	S8 ears were grown ear-to-row and self-pollinated and final selection made in Iowa nursery row/field Hartz Mountain. Line coded LH334.

^{* -} HC33 is derived from the public line B73.

Statement of Stability and Uniformity

LH334 has shown uniformity and stability for all traits described in Exhibit C. It has been self-pollinated and ear-rowed for four generations, with careful attention to uniformity of plant type to ensure homozygosity and phenotypic stability.

Statement of Variants

The line is stable, uniform and no variant traits have been observed or are anticipated in LH334.

EXHIBIT B (revised)

Statement of Distinctness

Holden's Foundation Seeds L.L.C. believes that Corn Variety LH334 is most similar to Corn Variety LH200, an inbred developed by Holden's Foundation Seeds L.L.C.

Corn Variety LH334 differ from Corn Variety LH200 at the following traits:

Trait	LH334	LH200
Silk Color	Yellow	Green
	(2.5 Y 8/10)	(5 GY 4/8)

2005

2000	
Variety	Tassel Branch Angle (degrees)
LH334	18.0 (Std Dev = 4.1, N= 10)
LH200	34.3 (Std Dev = 3.6, N= 10)
P_Val	0.000
Signif.	**

2006

Variety	Tassel Branch Angle (degrees)
LH334	26.0 (Std Dev = 5.7, N=10)
LH200	35.7 Std Dev = 3.6, N=10)
P_Val	0.003
Signif.	**

Significance levels are indicated as: + = 10%, * = 5 %, ** = 1%

Corn variety LH334 has yellow silk color and a narrower tassel branch angle than comparative corn variety LH200 which has green silk color and a wider tassel branch angle.

EXHIBIT B (cont'd)

Description of Experimental Design

The corn varieties LH334, LH200 and CM105 were grown at the Waterman, IL observation nursery in years 2005-2006. The varieties were planted in 2 row plots with 15 plants per row in each of the three years. Trait data were collected on 10 random representative plants for most traits from each 2 row plot. Data on qualitative traits are usually collected on 10 plants from each 2 row plot. For Exhibit C all data were pooled and reported as means across the years for subject variety and the standard variety with standard deviation. The varieties are randomly planted in a 4.5 acre observation nursery which is located within a larger 18 acre field. Besides the observation nursery, this field consists of a research seed increase nursery and an IP seed inventory nursery. The location of each of these individual nurseries is rotated each year to a different location within the 18 acre field. Therefore subject inbreds are not planted adjacent to comparative or standard varieties and may be located in different areas of the larger field each year, therefore being influenced by spacial differences within the field. Growing conditions within the field are not uniform as there are some slight topographical variations such as lower areas which may accumulate and retain water or higher areas which are usually drier. The field is tiled and therefore a variety maybe planted close to a tile line while a comparative variety maybe planted further away and in a low spot within the field. Temporal varieties can exist as weather conditions from year to year can vary as well as planting dates can vary from year to year based on weather conditions. Weather conditions each year can vary the maturity rate of the varieties due to either favorable or unfavorable growing conditions.

Trait variability is not observed for each variety within its own test plot-plants are usually uniform and data are collected on the "most" representative plants- variability occurs due to spacial location of the test plot for that variety from year to year and to the temporal variation of weather conditions from year to year during the 2-3 years data are collected.

Waterman Research Station Weather Data 2005-2006

Date	Average Precip. (mm)	Ave. Monthly Temp – Max. (F°)	Ave. Monthly Temp-Min (F°)	Ave. Monthly Rel. Humid Max (%)	Ave. Monthly Rel. Humid – Min (%)
June 2005	0.9	84.7	61.3	89.8	41.7
July 2005	2.0	84.9	61.7	93.4	44.7
August 2005	2.5	82.6	60.4	94.9	50.0
Sept 2005	1.8	79.9	55.0	94.3	44.3
June 2006	2.7	78.4	56.7	89.8	45.9
July 2006	2.3	84.2	64.6	93.5	55.4
August 2006	2.1	87.2	67.5	94.7	57.1
Sept 2006	1.6	80.0	61.6	90.1	50.8

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United States Department of Agriculture, Agricultural Marketing Service Science and Technology, Plant Variety Protection Office National Agricultural Library Building, Room 400 Beltsville, MD 20705-2351

OBJECTIVE DESCRIPTION OF VARIETY CORN (Zea mays L.)

	CONN (Zea III	ays L.)			
Name of Applicant(s)		Variety Seed Source	Variety	Name or Temporary De	signation
Holden's Foundation Seed L.L.C.				LH334	
Address (Street & No., or R.F.D. No., City, State, Zip Code and Coul	ntry)		FOR OF	FICIAL USE PV	PO Number
8350 Minnegan Road, Waterman, IL 60556			_	7001 0001	7
	· · · · · · · · · · · · · · · · · · ·			200600017	
Place the appropriate number that describes the varietal characters necessary. Completeness should be striven for to establish an adeq	typical of this inbred variety uate variety description.	in the spaces below. R	ight justify whole nu	mbers by adding leading	g zeroes if
COLOR CHOICES (Use in conjunction with Munsell color code to de	scribe all color choices: des	cribe #25 and #26 in Co	omments section):	· · · · · · · · · · · · · · · · · · ·	
01=Light Green 06=Pale Yellow	11=Pink	16=Pale	: Purple	21=Buff	
02=Medium Green 07=Yellow 03=Dark Green 08=Yellow-Orange	12=Light Red	17=Pur		22≐Tan	
03=Dark Green 08=Yellow-Orange 04=Very Dark Green 09=Salmon	13=Cherry Red 14=Red	18=Cofc 19=Whit		23=Brown	
05=Green-Yellow 10=Pink-Orange	15=Red & White		te Capped	24=Bronze 25=Variegated (De:	ecribo)
	10 1100 0 111110	20-7411	е саррес	26=Other (Descri	
STANDARD INBRED CHOICES (Use the most similar (in background	nd and maturity) of these to	make comparisons bas	sed on grow-out tri	al data):	<u></u>
Yellow Dent Families: Family Members	Yellow Dent (Unrelated	i):	Sweet		_
B14 CM105, A632, B64, B68	Co109, ND246, Oh7, T232		C	13, lowa5125, P39, 213	2
B37 B37, B76, H84	W117, W153R		Popcor	n'	
B73 N192, A679, B73, NC268	W182BN			 G1533, 4722, HP301, H	IP7211
C103 Mo17, Va102, Va35, A682					
Oh43 A619, MS71, H99, Va26 WF9 W64A, A554, A654, Pa91	White Dent:	20	Pipeco		
	Cl66, H105, Ky2:	20	1	lo15W, Mo16W, Mo24W	<i>'</i>
TYPE: (describe intermediate types in Comments section)			Standard Inbred	Name CM105	
2 1=Sweet 2=Dent 3=Flint 4=Flour 5=Pop 6=Ornamental 7=Pipecorn 2 T					
2. REGION WHERE DEVELOPED IN THE U.S.A.:			Standard Seed S	ource	
2 1=Northwest 2=North central 3=Northeast 4=Southea	st 5=South central 6=So	uthwest 7=Other	2 Region		
3. MATURITY (In Region Best Adaptability; show Heat Unit formula i	n "Comments" section):				
DAYS HEAT UNITS 8.1 1.5.8.8.0 From emergence to 50% of plant	- t10-		DAYS	HEAT UNITS	
The state of the s			68	1400.5	
8 0 1 5 0 5. 5 From emergence to 50% of plant	s in pollen		64	1292.5	
From 10% to 90% pollen shed					•
From 50% silk to optimum edible	quality				
From 50% silk to harvest at 25%	moisture				
4. PLANT:	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
2 1 4. 4 cm Plant Height (to tassel tip)	18.7	30	160.5	24.6	30
7 8. 3 cm Ear Height (to base of top ear node)	8.5	30	49.4	12.0	30
1 2. 3 cm Length of Top Ear Internode	1.3	30	11.7	2.0	30
Average Number of Tillers					
Average Number of Ears per Stalk	0.1		40		
·	0.1	30	1.0	0.1	15
2 Anthocyanin of Brace Roots: 1=Absent 2=Faint 3=N	Noderate 4=Dark		2		
Application Variety Data	Page 1		Standard Inbred	Data	

Application Variety Data	<u>-</u> -			20000		
	Page 2		Standard Inbred	Standard Inbred Data		
5. LEAF:	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size	
9 . 2 cm Width of Ear Node Leaf	1.5	30	7. 1	0.7	30	
	7.2	30	66.7	9.6	30	
5.9 Number of leaves above top ear	0.5	30	5. 7	0.6	15	
1 6. 2 degrees Leaf Angle (measure from 2nd leaf above ear at anthesis to	3.7 stalk above leaf)	30	4 7.8	7.0	30	
0 2 Leaf Color (Munsell code 5 GY 4/8)			0 2 (Munsel	I code 5 GY 4/8)		
3 Leaf Sheath Pubescence (Rate on scale from 1	=none to 9=like peach fuzz)		2			
6 Marginal Waves (Rate on scale from 1≂none to	9=many)		6			
5 Longitudinal Creases (Rate on scale from 1=no	ne to 9=many)		5			
6. TASSEL:	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size	
4.8 Number of Primary Lateral Branches	0.7	30	5. 3	1.2	30	
2 2. 2 Branch Angle from Central Spike	7.3	30	3 3.2	9.0	30	
4 4. 6 cm Tassel Length (from top leaf collar to tassel tip)	3.8	30	3 4.4	2.6	30	
4.8 Pollen Shed (Rate on scale from 0=male sterile to	9=heavy shed)		6.2			
0 7 Anther Color (Munsell code 2.5 Y 8/10)			,	0 7 (Munsell code 2.5 Y 8/10)		
1 2 Glume Color (Munsell code 2.5 R 5/8)				ell code 2.5 R 5/8)		
1 Bar Glumes (Glume Bands): 1=Absent 2=Present	ŧ		1			
· 7a. EAR (Unhusked Data):		****			144.1	
0 7 Silk Color (3 days after emergence) (Munsell code 2.	5 Y 8/10)		0 7 (Muns	ell code 2.5 Y 8/10)		
0 2 Fresh Husk Color (25 days after 50% silking) (Munse	l code 5 GY 4/8)		0 2 (Munse	ell code 5 GY 4/8)		
2 1 Dry Husk Color (65 days after 50% Silking) (Munsell of	ode 2.5 Y 8/4)		2 1 (Munse	eli code 2.5 Y 8/4)		
1 Position of Ear at Dry Husk Stage: 1=Upright 2=Horizon	ontal 3=Pendent		1			
7 Husk Tightness (Rate on scale from 1=very loose to 9	every tight)		9			
1 Husk Extension (at harvest): 1=Short (ears exposed) 2 tip) 4=Very Long (>10 cm)	:= M edium (<8 cm) 3= L ong (8	3-10 cm beyond ear	1			
7b. EAR (Husked Ear Data):	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size	
1 4. 8 cm Ear Length	1.4	30	1 4.0	1.6	30	
4 1. 6 mm Ear Diameter at mid-point	1.2	30	3 8.0	1.4	15	
1 0 7.9 gm Ear Weight	4.7	30	7 3.2	1.9	15	
14.7 Number of Kernel Rows	1.0	30	1 3.9	0.9	15	
2 Kernel Rows: 1=Indistinct 2=Distinct			2			
1 Row Alignment: 1=Straight 2=Slightly Curved 3=S	piral		1			
7.5 cm Shank Length	1.2	30	6.8	2.0	15	
2 Ear Taper: 1=Slight 2=Average 3=Extreme			2			
Application Variety Data			Standard Inbred	Data		
Note: Use chart on first page to choose color codes for color traits.						

Application Va	ariety Data	Page 3	14 to 1 to	Standard Inbred	Data	
8. KERNEL (Dried):	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
10.8	mm Kernel Length	0.5	30	0 9.2	1.0	15
8.5	mm Kernel Width	1.1	30	0 8.2	0.6	15
5.3	mm Kernel Thickness	0.3	30	0 5.1	1.2	15
39.8	% Round Kernels (Shape Grade)	3.7	500g	5 6.8	2.6	500g
1	Aleurone Color Pattern: 1=Homozygous 2=Segregat	ing (describe)		1		
19	Aleurone Color (Munsell code Lighter than 2.5 Y 9/2)			1 9 (Muns	ell code Lighter Than 2.5	Y 9/2)
08 H	ard Endosperm Color (Munsell code 2.5 Y 7/10)			0.7 (Munse	ell code 2.5 Y 8/8)	·
3	Endosperm Type: 1=Sweet (su1) 2=Extra Sweet (sh 5=Waxy Starch 6=High Protein 7=High Lysine 10=Other	2) 3=Normal Starch 4 8=Super Sweet (se)	1=High Amylose Starch 9=High Oil	0 3		
2 8.8	gm Weight per 100 Kernels (unsized sample)	2.9	1550 seeds	2 2.5	2.6	2000 seeds
9, COB:		Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
2 4 .7	mm Cob Diameter at mid-point	1.4	30	2 6. 2	1.3	15
1 1	Cob Color (Munsell code 5 R 6/6)			1 4 (Muns	ell code 5 R 4/10)	
10. DISEASE F Race or Strain	RESISTANCE (Rate from 1 (most susceptible) to 9 (most Options blank if polygenic):	resistant); leave blank if	not tested; leave		***************************************	
A. Leaf Blights	, Wilts, and Local Infection Diseases					
Common F Common F Common F Eyespot (/ Goss's Wi Gray Leaf : Helminthos Northern L Southern F Southern R	se Leaf Blight (Colletotrichum graminicola) Rust (Puccinia sorghi) Smut (Ustilago maydis) Kabatiella zeae) It (Clavibacter michiganense spp. nebraskense) Spot (Cercospora zeae-maydis) sporium Leaf Spot (Bipolaris zeicola)eaf Blight (Exserohilum turcicum)eaf Blight (Bipolaris maydis)eaf Blight (Bipolaris maydis)eaf Blight (Bipolaris maydis)eaf Blight (Bipolaris maydis)	Race _ Race _ Race _		3 Northern Leaf 6 Southern Leaf Southern Rus 4 Stewart's Wilt	st out out fium Leaf Spot Blight	Race 1 Race O
Head Smut Maize Chlor Maize Chlor Maize Dwar Sorghum Do Other (Spec	Necrosis (MCMV and MDMV) (Sphacelotheca reiliana) otic Dwarf Virus (MCDV) otic Mottle Virus (MCMV) f Mosaic Virus (MDMV)	Strain		Maize Chlorit Maize Dwarf	tic Dwarf Virus ic Mottle Virus Mosaic Virus wny Mildew of Corn	Strain
Diplodia Sta Fusarium St	e Stalk Rot (Colletotrichum graminicola) Ik Rot (Stenocarpella maydis) alk Rot (Fusarium moniliforme) talk Rot (Gibberella zeae) ify)			Anthracnose Diplodia Stall Fusarium Sta Gibberella St Other (Specif	(Rot .lk Rot alk Rot	
Diplodia Ear Fusarium Ea Gibberella E	Ear and Kernel Rot (Aspergillus flavus) Rot (Stenocarpella maydis) r and Kernel Rot (Fusarium moniliforme) ar Rot (Gibberella zeae) fy)			Aspergillus Ear I Diplodia Ear I Fusarium Ear Gibberella Ea Other (Specif	& Kernel Rot r Rot y)	
Note: Use chart	on first page to choose color codes for color traits	*****				

Application Variety Data	Page 4		Standard Inbred Data
INSECT RESISTANCE (Rate from 1 (most susceptible) to 9 (most releave blank if not tested):	esistant); Standard Deviation	Sample Size	Standard Deviation Sample Size
Banks Grass Mite (Oligonychus pratensis)			Banks Grass Mite
Corn Earworm (<i>Helicoverpa zea</i>) Leaf-Feeding Silk Feeding :mg larval wt.			Corn Earworm Leaf Feeding
Ear Damage			Ear Damage
Corn Leaf Aphid (Rhopalosiphum maidis) Corn Sap Beetle (Carpophilus dimidiatus)			Corn Leaf Aphid Corn Sap Beetle
European Corn Borer (Ostrinia nubilalis) 1st Generation (Typically Whorl Leaf Feeding) 2nd Generation (Typically Leaf Sheath-Collar Feeding) Stalk Tunneling: cm tunneled/plant		<u></u>	European Corn Borer 1st Generation 2nd Generation
Fall Armyworm (Spodoptera frugiperda) Leaf-Feeding Silk-Feeding: mg larval wt.		:	Fall Armyworm Leaf Feeding
Maize Weevil (Sitophilus zeamaize) Northern Rootworm (Diabrotica barberi) Southern Rootworm (Diabrotica undecimpunctata)			Maize WeevilNorthern RootwormSouthern Rootworm
Southwestern Corn Borer (<i>Diatraea grandiosella</i>) Leaf Feeding Stalk Tunneling:cm tunneled/plant			Southwestern Com Borer Leaf Feeding
Two-spotted Spider Mite (Tetranychus urticae) Western Rootworm (Diabrotica virgifera virgifera) Other (Specify)			Two-spotted Spider Mite Western Rootworm Other (Specify)
12. AGRONOMIC TRAITS:	<u> </u>		
6 Stay Green (at 65 days after anthesis) (Rate on a scale from	1=worst to 9=excellent \		1 Stay Green
0 0 . 0 % Dropped Ears (at 65 days after anthesis)	T Word to 0 - Chachertay		0 0 . 1 % Dropped ears
0 0 .0 % Pre-anthesis Brittle Snapping		ļ	0 0 . 0 % Pre-anthesis Brittle Snapping
0 0. 0 % Pre-anthesis Root Lodging		İ	0 0 . 0 % Pre-anthesis Root Lodging
0 0. 0 % Post-anthesis Root Lodging (at 65 days after anthesis)			0 0 . 0 % Post-anthesis Root Lodging
Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture)			Yield
13. MOLECULAR MARKERS: (0=data unavailable; 1=data available but	not supplied; 2=data supplied	 I)	
0 Isozymes 0 RFLP's 0 RAPD's	Other (Specify)		
REFERENCES:			
Butler, D.R. 1954. A System for the Classification of Corn Inbred Lines. I Emerson, R.A., G.W. Beadle, and A.C. Fraser. 1935. A Summary of Lint Farr, D.F., G.F. Bills, G.P. Chamuris, A.Y. Rossman. 1989. Fungi on Pla Inglett, G.E. (Ed.) 1970. Corn: Culture, Processing, Products. Avi Publisi Jugenheimer, R.W. 1976. Corn: Improvement, Seed Production, and Us McGee, D.C. 1988. Maize Diseases. APS Press, St. Paul, MN. 150 pp. Munsell Color Chart for Plant Tissues. Macbeth. P.O. Box 230. Newburg The Mutants of Maize. 1968. Crop Science Society of America. Madison Shurtleff, M.C. 1980. Compendium of Corn Diseases. APS Press, St. Pa Sprague, G.F., and J.W. Dudley (Editors). 1988. Corn and Corn improve Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S., Bul. 831. 1959 U.S. Department of Agriculture. 1936, 1937. Yearbook.	kage Studies in Maize. Corne nt and Plant Products in the l ning Company, Westport, CT. es. John Wiley & Sons, New h, N.Y. 12551-0230 , WI. ul, MN. 105 pp. ment, Third Edition, Agronom	I A.E.S., Mem. 180. Inited States. The A York.	merican Phytopathological Society, St. Paul, MN.
COMMENTS (e.g. state how heat units were calculated, standard inbred	seed source, and/or where da	ata was collected. C	ontinue in Exhibit D):
Heat Unit Calculation: GDU = <u>Daily Max Temp (<=</u> Supplemental data provided for pollen shed, ear weight, % rouninventory data. Supplemental data for quantitative traits of subjections.	d kernels and weight per	100 kernels from	2006 production parent test data and 2006 seed

REPRODUCE LOCALLY. Include form quarter and edition date on all	reproductions.	ORM APPROVED - OMB No. 0581-0059
U.S. DEPARTMENT OF ASRICULTURE AGRICULTURAL MARKETING SERVICE EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to det certificate is to be issued (7 U.S.C. 2 confidential until line certificate is issued	ermine if a plant variety protection 421). The information is third
NAME OF APPLICANT(S) Holden's Foundation Seeds L.L.C.	2 TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME LH334
4. ADDRESS (Smelton) No.; CERF.D; No.; City, State, and ZIP, and County)	5: TELEPHONE (unclared alread ecole)	5: FAX Distante avéa code)
8350 Minnegan Road Waterman, IL 60556 U.S.A.	(815) 758-9281 7. PVPO NUMBER	(815) 758-3117
		200600017
8. Does the applicant own all rights to the variety? Mark an "X" in the		
9. Is the applicant (individual or company) a U.S. National or a U.S. b	ased company? If no, give name of co	ountry X YES NO
10. Is the applicant the original owner? X YES NO	If no, please answer one of the foll	
a. If the original rights to variety were owned by individual(s), is (a	are) the original owner(s) a U.S. Nationa	al(s)?
YES NO	If no, give name of country	
 b. If the original rights to variety were owned by a company(ies), 	is (are) the original owner(s) a U.S. bas	ed company?
, YES NO	If no, give name of country	· · · · · · · · · · · · · · · · · · ·
11. Additional explanation on ownership (if needed, use the reverse to	or extra space):	
Corn Variety LH334 was originated and deversion Seeds, L.L.C. By agreement be breeder, all rights to any invention, discovery Foundation Seeds, L.L.C. No rights to such the breeder.	eloped by a breeder employed b tween Holden's Foundation See or development are assigned to	ds, L.L.C. and the o Holden's
PLEASE NOTE:		
Plant variety protection can only be afforded to the owners (not license	ees) who meet the following criteria:	
 If the rights to the variety are owned by the original breeder, that penational of a country which affords similar protection to nationals of If the rights to the variety are owned by the company which employer nationals of a UPOV member country, or owned by nationals of a country and apprise 	the U.S. for the same genus and specie ed the original breeder(s), the company	es
genus and species. 3. If the applicant is an owner who is not the original owner, both the o	riginal owner and the applicant must me	eet one of the above criteria
The original breeder/owner may be the individual or company who dire		

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EXHIBIT F

	DECLARATION REGARDING DEPOSIT	<u> </u>
NAME OF OWNER (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	TEMPORARY OR EXPERIMENTAL DESIGNATION
Holden's Foundation Seeds LLC	8350 Minnegan Road, Waterman, IL 60556 USA	
		VARIETY NAME
		LH334
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	FOR OFFICIAL USE ONLY
Timothy R. Kain	8350 Minnegan Road, Waterman, IL 60556 USA	PVPO NUMBER
		200600017

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

3/17/2008